PROSTATIC OBSTRUCTIONS AND THEIR REMOVAL.*

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ORATION ON SURGERY.

To the President and Members,
Medical Society, State of California:—

GENTLEMEN:—When I was asked by our President to write for you an Oration on Surgery, I was rather puzzled to know the character of the address I should make. In response to an inquiry he told me I was at liberty to write upon anything I cared to. I decided to bring before you the advancements along a line of surgery which is to most physicians strange, almost unheard of, and certainly not believed in; by many surgeons looked upon with curious doubt and disbelief; by a few regarded with favor, but not actively pursued; by some enthusiastically recommended without judgment and without conscience; and by a few practised with care, with an endeavor to obtain experience valuable in developing rules of precision for the work of those who may follow them, or for those who have not the means of procuring considerable experience for themselves. I refer to the radical surgery which reopens the vesical outlet closed by encroachment, in whole or in part, of the chronically inflamed prostate gland upon the urethra, which naturally passes through it as a tunnel through a hill. This subject has been close to my heart since 1892, and much of my time has been occupied in its practical development. I could not believe the old-fashioned assertion, "Once a prostatic, always a prostatic." I had no faith in the dictum of the master, Guyon, that all cases of senile prostatic obstruction were sclerotic. I believed that successful methods could be developed for the relief and cure of such sufferers, and there were many other practical surgeons in this wide world, but principally in America, who thought as I did. We have gone on quietly developing this belief and showing our faith by our works, until now, to-day, to you I feel that I may state positively and absolutely, speaking only from the experience of my own operations, which have now numbered close to one hundred, that no man who is prostatic, unless his prostatism is due to cancer, need feel that he has a disease of which he may not be rid, with much less risk to his life than he takes if he refuses the assistance offered to him by the surgeon. Many of these cases can be entirely cured. The tonicity of bladders which have been atonic for years, scarcely possessing enough motor power to force the urine slowly but reluctantly through a catheter to fall without curve at the feet of the individual, have the contractile power of the detrusor so restored in a few weeks, after the removal of the obstruction, that a good sized stream of urine will be projected in a forceful arc a considerable distance from the body. The crippled kidneys, with dilated ureters, pelves and calyces and obstructed and choked urinary tubules, oftentimes the seat of abscesses; secreting too little or too much urine, which always contains albumen in varying amounts and casts, usually pus, and sometimes blood, and always, whether the urine be increased or diminished, secrete a quantity or urea greatly below normal; which perhaps for years have been unable to take care of the poisonous excreta, the separation of which from the blood is their duty, will, when the prostatic obstruction is removed, in a short time begin to functionate properly. The blood, pus and casts disappear; the albumen lessens and often is lost entirely, and the quantity of urea increases. The slow moving and doubtful mind becomes alert, the lagging step quickens, the nauseated and rebellious stomach changes to an eager receptacle for food, the ashy cheek turns pink again, and frequently sexual power held in abeyance for years, almost forgotten, reasserts itself and is restored.

This is not a fancy picture which I have drawn, but one which may be shown to you any day, if you are of an inquiring mind, in any city of considerable size and importance in America.

With the achievements of the past ten years in the surgery of the urinary organs before us, it is very interesting to read the works of those distinguished Englishmen, John Hunter and his student and successor, Everard Home, whose labors and conclusions dominated surgical methods in the treatment of these diseases for nearly a century.

Hunter, speaking of the treatment of the swelled prostate gland, Edition March 30, 1796. Page 174:

The methods practised in the above cases afforded only temporary relief, but must be had recourse to, to avoid the consequences of retaining the urine too long. As a temporary relief from pain, as also to remove spasm, opiate clysters should be thrown up once or twice a day. A certain cure, I am afraid, is not yet known. In one case in which I was consulted, a surgeon had found burnt sponge reduce the swelling of the gland very considerably. This disease, like stricture, produces complaints in the bladder. I have recommended sea bathing and in some cases received considerable advantage from it, and in two cases a cure of some standing.

Home, in his position as successor to John Hunter, and as curator of the Hunter Museum, had unusual opportunities for study of disease of the prostate. This subject happened to possess great attraction for him and its study gave him great satisfaction. To his imperfect investigations and immense influence we owe the false idea that this gland is lobular, consisting of two lateral and one middle lobe. This great surgeon very narrowly escaped finding the true solution

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of prostatism. On page 23, Vol. 2, "On the Disease of the Prostate Gland," he says:

The lateral lobes when cut into were found to be made up of nodules like that in the middle lobe. *They were so loosely connected with one another that they might have been separated by dissection.* Their internal structure was in all the same, and like that already described. The projections seen externally were small portions of the outer surface of these nodules pressing against the general covering in which they were all contained.

Had he followed up the train of thought expressed in this paragraph, prostatectomy would have been introduced nearly one hundred years ago. He had thoroughly studied the symptoms of prostatism and he was well aware of the dangers. On pages 31 and 32, Vol. 2, he says:

Upon the present occasion, when treating upon a disease in which the symptoms if not early attended to increase rapidly and prove fatal, it is peculiarly necessary to state all the fatal consequences of delay by showing the mischief that is produced by it.

Instead of seeking a solution of the problem by operative interference, always with the idea that it was the enlarged middle lobe that caused the distressing symptoms, his attention was given entirely to the perfection of the drainage of the bladder in such manner that the congestion of the part would be allayed and the cure, relative or total, of the affected obstruction be obtained. He very properly considered that the diseased condition had nothing whatever to do with any constitutional vice or general depression. Of this he says, page 86, Vol. 2:

I am induced to consider the disease of which I am treating as one that is entirely local, produced by local violence, kept up by local circumstances and having all its symptoms aggravated by a succession of causes of irritation belonging to the natural action of the organs to which the prostate gland is attached, and I am sorry to say that the disease has not only its progress increased, but unnecessarily produced by the unskillful use of the instruments employed for its relief, and has been too often the means of putting an end to the patient's life, which, had the case been differently treated, there is every reason to believe, by reference to the other cases, might have been preserved for many years.

He was the originator of prolonged drainage for the relief of retention and cystitis due to an enlarged prostate. He was fortunate in discovering the original Weisse, who manufactured for him elastic catheters of high grade, which could be retained in the bladder for weeks, and he sometimes retained the catheter for so long as from one to three months, until the bladder would for a time regain the power of emptying itself. He was firm in his belief that these cases seen at the right time, and treated by drainage in this way, became entirely well, for he says:

As cases of the disease do not always come under our care in the earlier stage, it frequently happens that too much has been done and the parts too much injured to admit of the recovery of the patient. Were it otherwise, I am very sanguine in my opinion that most of them might get well.

The precepts of Home were dominant for more than fifty years, and surgeons and physicians looked upon the enlargement of the prostate gland as a trouble which could not be removed by operative measures. This was further strengthened by the dictum of Guyon, who with his powerful Necker school, for many decades has moulded surgical opinion upon this subject in France, and through those educated in the French universities much of the opinion of the world. It was not comprehended that the problem presented was peculiarly a mechanical one, that prostatism consists solely of the obstruction caused by the encroachment of growths arising from the abnormal development of the glandular, fibrous or muscular structures contained within the capsule of this organ pressing upon the urethral tunnel, upon the internal urinary meatus, or upon the muscular tissue of the bladder wall, interfering by pressure with its inervation or with its contractile rhythm.

In addition to this, a variety of other reasons held the knife in check—the fear of hemorrhage which could not be controlled by reason of the depth at which the vessels were situated; the terrors of vesical tenasmus; the fear of contamination of the wound by the urine discharged upon it; and, before the age of aseptic surgery, the fear of urinary infiltration and gangrene, bound the surgeon to the doctrines of Home and Guyon.

Tentative and careful were the first bold spirits who planned the intentional removal of prostatic obstruction. From time to time, in operating for stone or for tumor of the bladder, a projecting and obstructing prostatic prominence had been removed with its covering of bladder mucous membrane by snare or ligature and scissors, but I think the first deliberately planned and executed prostatectomy was done by William Bellfield of Chicago, in 1886. Since then numerous workers in various parts of the world have developed various methods for attacking and removing prostatic obstructions, only two of which are worthy of attention.

Either the obstructing portions of the gland are shelled out or excochliated through an incision made into the membranous or prostatic urethra from the perineum, or they are removed through a cut made through the belly wall and anterior wall of the bladder.

The instruments necessary for the perineal route are very few. A sharp bistouary to sever the skin and perineal muscles; a sharp lithotomy knife to enter the urethra; a staff (full curved by preference); a probe pointed, narrow gorget to enter the incision made in the membranous urethra and pass on to the bladder; a Blizzard knife and a pair of uterine dilators to enlarge the incision; a long-handled, blunt capsule knife or a pair of forceps, to open the capsule of the prostate; two or three long-pointed curved tenaculi, to pull the loosened tumors down and prevent them from slipping into the bladder while being

enucleated; a narrow packer, to introduce a gauze trailer along the finger into the capsule of the prostate to still the hemorrhage; a short metallic tube, No. 36 F evacuating, with a very large eye on the upper surface, almost at its end, so that it cannot become obstructed by clots, or if it does, so that a Chismore evacuating bulb can be attached to pump them out, and a strong, long-handled rongeur are what I make use of. In many cases one may get along with a knife and a staff, if he is inclined to operate for show, or in the same spirit which prompts the ship carpenter to build a boat with an adze. All of the various devices which have been introduced for the pulling down of the neck of the bladder or the prostate, such as the rubber retractor of Simms or the metallic ones of Ferguson and others may be easily dispensed with, as they do not facilitate the operative work, but rather impede it.

The position of the patient advocated by George E. Goodfellow of San Francisco and Tucson, of extreme flexion of the thighs upon the abdomen, and the legs upon the thighs, is of much greater importance and assistance than all of these devices. There are very few cases which may not be successfully operated through a simple median perineal incision carried through the skin and the perineal muscles from the scrotal junction to a point about one-half inch in front of the anus, care being taken not to sever the anal sphincter. Exceptionally, a prerectal or inverted Y incision may be necessary. My experience, however, with it has not been satisfactory. In three cases in which I used it, and in three others operated in Chicago, and which afterward came under my care, the scars left were painful for many months. One of my own cases required a secondary operation for relief of the pain and the obstruction to the urethra caused by the contraction of the scars.

For the removal of the prostate by a suprapubic cut, precautions are necessary to keep out of the abdominal cavity and to avoid disturbing the cellular tissues in the space of Retzius. The first is best secured by placing the patient in the full Trendelenberg position after cutting through the skin and abdominal muscles. The second is accomplished by sewing the anterior bladder wall tightly up to the transversalis facia by a few catgut stitches just before or immediately after opening the bladder. This effectually cuts off the space underneath the symphysis from injury and infection. The sides of the cut in the bladder should be secured to the recti muscles by two or three silk or silkworm gut ligatures on each side. The time thus occupied is well spent, for it avoids much trouble after operation. The bladder being thus secured, the prostatic outgrowths are sought for with the finger, the capsule is opened, and they are enucleated, if possible through an incision made through the bladder neck centrally or laterally, as the case may demand.

For this purpose it is better to use some sort of blunt instrument which will tear more than cut, as the hemorrhage is less. These tumors are sometimes so dense and adherent that they cannot be removed by enucleation. They must then be removed piecemeal with rongeurs or serrated scissors and long tissue forceps, the index finger of the left hand being used as a guide for the amount of tissue to be removed and the force necessary to remove it. This is very tedious and sometimes a very bloody procedure, but withal one that gives very satisfactory results.

When I use sectio-alta for prostatectomy, I nearly always make a median perineal incision to utilize for counter-pressure, and if this is not done I obtain the necessary support from the hand of an assistant within the rectum. I drain these cases always with the DePezzer tubes. The instruments required for the operation are a knife; a half-dozen pairs of artery forceps, which should be smooth-grooved, so as not to tear the bladder; some well curved needles, both round pointed and sharp pointed; a pair of blunt pointed or serrated scissors; two or three pairs of long-handled and strong-jawed rongeurs; a staff for the perineal incision, if it is made, and one or two DePezzer suprapubic drainage tubes.

In considering the advisability of the doing of a radical operation in cases of difficult or impossible natural micturation, caused by enlarged prostate, it is well to be conservative, without being unduly so. I have heard it stated by some operators, and read in the writings of others, that the proper time to enucleate an enlarging prostate, or do a Bottini operation upon it, is when the irritation phenomena which usher in prostatism—increased urinary frequency, pelvic burning and straining—associated with the evidences demonstrable to the finger in the rectum, with perhaps the presence of a little pus, or from time to time a few red corpuscles in the urine, are first noticed. With this I cannot agree, for by proper medical aid, which includes careful hygienic measures, the evil hour of operation may be put off quite a number of years without great detriment to the prostatic. But when once the trouble becomes so great that the treacherous existence of a catheter life is forced upon the person operation should be urged, because then a new and continuous element of danger is ever present—I mean the constant threat of septic poisoning from unclean materials carried in by the catheter. However particular the individual may be, it is not possible for him at all times to be either gentle with the introduction of the instrument or clean with the lubricant or his immediate person. He is day by day, even hour by hour, risking his existence upon a gamble that he will not infect himself, and

he had far better take the small chance of death necessary to obtain a radical cure by operation.

The remark is often made to me by medical men that it is useless to think of relieving certain people by operation for enlarged prostate because they are too old. No one is too old for these operations. I have done a successful Bottini upon a man of ninety, bent nearly double, and I have known successful prostatectomies to be done upon several genlemen who were more than eighty. The statements often come from the same source, "He cannot be helped, for his urine is full of albumen and contains casts" or, "He has stone in the bladder, and you can't do both operations at once." "It will take too long," or "He can't stand the two operations; he is too weak." While carefully noting these factors I do not let them influence me. You have to operate these people as you find them and not in the condition you would like to have them. If they were in good shape they might not need an operation, and unless they were inoculated with what might be termed operative fever, they would most probably not consent to one.

The presence of pus, of blood, of albumen in limited quantities, of casts of any kind, excepting amyloid, are not contra-indications for the doing of either prostatectomy or prostatotomy. Nor does extreme age, long sickness, feebleness within reasonable limits, or septic symptoms such as nausea or hiccough, prohibit surgical interference. There are just three contra-indications to which I pay attention: First, a tendency to bleed freely from very slight injuries; second, the existence of serious heart lesions accompanied by a great general muscular feebleness; third, and most important, is the inability of the kidneys to secrete a reasonable quantity of urea, and what I consider a reasonable quantity in these cases is from 15 to 25 grammes per day. In a number of the cases which got well for me after operation, the daily quantity of urea for weeks had not exceeded 15 to 20 grammes per day. This outcome seems really wonderful, when the severity of the operation and the loss of a quantity of blood, which is always very considerable, when proportioned to the age and strength of the individual, is taken account of.

I do not know what considerations control other operators in the selection of their cases. I take mine as they come, doing a perineal or suprapubic excochleation, or both, or the Bottini operation, as my judgment dictates for the particular case. I never refuse to make the attempt to relieve the sufferings on one of these miserable wretches, no matter how bad his condition may be, if his kidneys work in such a manner that I believe with care they may be kept from striking on him during his recovery from the surgical injuries necessarily inflicted in the attempt to remove the cause of his condition. Some have come to operation with me that a surgeon desirous of having entirely favorable statistics might have refused to operate.

One need not be so discouraged as not to attempt to relieve the patient unless the individual is one of the three clases which I have designated as unfavorable. If the percentage of urea runs so low that any decided hemorrhage is very dangerous, or if the person is so feeble that it is risky to confine him to bed for a few days, or if he has a bad pyelitus, it is better to do a Bottini operation and chance his being in a better condition later for a prostatectomy if the Bottini operation does not give him permanent relief. I have had occasion to enucleate the prostates of three persons upon whom I had done Bottini operations, which gave very excellent relief for a time, varying from one to two years, and speak positively when I say that the scars left by the Bottini do not in any way seriously interfere with the subsequent enucleation of the tumors. The scars are soft and pliable, quite contrary to the teachings of certain urologists who have had no personal experience with them.

When it is known that the obstruction is cancerous enucleation should not be attempted, for such cases usually succumb to primary or secondary hemorrhage. An exception was one of my cases, an enormous spindle-celled sarcoma weighing about two pounds, which included all the prostatic substance, but not its capsule, and which had not invaded the urethra, but had attacked the anterior wall of the rectum, was successfully removed by enucleation through an aperture made in the anterior wall of the rectum, with primary recovery, and no recurrence up to the time of death from other causes, four years afterward.

If, when the urethra is opened, cancerous structure is recognized by the fingers or eye, a prostatotomy made with the apparatus of Young, Freudenberg or Chetwood by the Bottini method offers the only relief to the sufferer, for if the burns are made slowly, with the ampere meter registering not less than 45 nor more than 50 amperes, it will make a wound which will not bleed and will heal perfectly. If the enlargement is very dense and cement-like, and when the capsule is slit the tumors enucleate with great difficulty or not at all, I believe it is better to attempt the relief of the patient by a Bottini operation done with the parts in sight, than it is to channel a ragged and uncertain groove through the obstruction with rongeur and scissors.

Some operators teach that all prostatectomies should be done by sectio-alta, and some claim that the suprapubic cut is never necessary; that all obstructions may be removed through an incision in the perineum. Neither is right in his contention. It is true that however peculiar and irregular the shape of the encroachment of these

tumors on the urethra and bladder may be, provided they are not fibroid or myomatous, when skill is acquired in enucleation, by the aid of hooked retractors or stout tenaculi, nearly all may be brought down through a median perineal incision and delivered without entering the bladder. If the bladder must be entered, it is better to do so by cutting directly through the neck posteriorly by the backward cut, originally proposed by Harrison, as a cure for prostatism. By this means the finger can, in most instances, be easily passed into the bladder and swept over its posterior and lateral surfaces, feeling for isolated protuberances, large or small, beneath the mucous membrane, sometimes unconnected and sometimes connected with the body of the prostate. Such tumors can often be opened with a long-handled capsule knife with the finger as a guide, enucleated and delivered.

I have seen a few cases where the enlargement sprung out from one side of the prostate high up, projecting into the bladder without coming in contact with its base, hanging down into the urethral mouth from the top wall, so to speak, and acting when the bladder was full like a ball valve, exactly as the so-called middle lobe is supposed to act. I have met small adenoid nodules set in an inflammatory cement directly around the bladder mouth, pouting into the mucous membrane just enough to stop it up, and if one removes a mass as large as a fist, and leaves such little fellows, which are the real obstructing portions, undisturbed, the operation will either be wholly or partially unsuccessful.

Again, the tumors projecting into the bladder may be fibroid, and after the adenoid nodules from about the prostatic urethra have been removed, it is found that no impression upon the obstructions beyond the bladder neck by an attempt to excochleate can be made. Sometimes on entering the prostatic urethra and commencing to enucleate, a dense fibroid or myomatous growth through which a channel can only be cut with the rongeur is found. In all such cases it is necessary to open the bladder suprapubically for the removal of the obstructions.

I confess the greater my experience the more it troubles me to add this extra cut. In such prostatics the bladder is usually very foul, and the belly wound becomes easily infected. As great speed in the doing of these operations should be used as is consistent with thoroughness, and this will vary with the operator. The one operating must know how much or how little is necessary to do. Speed in operating may prove to be very delusive. I know one operator whose speed is said to be remarkable, but he has never had an approximately perfect result.

If the cystoscope can be introduced into the bladder before operation and projecting nodules of considerable size can be seen upon the superior portion of the lateral quadrants or the superior quadrant, or springing from the prostate on one side far away from the bladder neck, I prefer always to make the suprapubic cut for removal of the obstructions, making the perineal cut afterwards, if upon examination it appears to be necessary. The after-treatment of these cases is generally easy enough if you have a skilled nurse, otherwise it becomes a subject which is often disagreeable and unusually burdensome, onerous and time-absorbing for the surgeon.

If the work for the removal of the obstruction can be done without disturbing or breaking through the outer capsule of the prostate or tearing the neck of the bladder, the immediate hemorrhage is not alarming; but when compared with other surgical operations, with the exception of those about the face, the hemorrhage is always quite considerable, and sometimes where the arteries are sclerotic, or some of the large veins of the capsule are opened, it is severe and not always easy to control. The best method of doing this is to use hot water to 120 degrees, the tissues of the perineum, buttocks and scrotum being protected by sterilized vaseline. If this does not suffice, the wound can be slightly packed with gauze, moistened in a solution 1-1000 of adrenalin chloride passed in along the finger and carried up inside the capsule on each side.

Some operators do not drain, declaring it to be unnecessary. If the urine be clear and sweet its contact can never do any harm to the perineal wound unless the raw surface extends beyond the tissue of the capsule of the prostate. When the urine is alkaline, or rather ammoniacal, and the bladder has contained calculi or incrustations upon ulcerated bosses of the prostate, or where there is fear of hemorrhage, it is much better, I believe, to drain. For this purpose, I at first used Watson's perineal drainage tubes but they are too short to fit all perineums, are not very comfortable and are expensive. I then used the Tiemann soft rubber perineal tube which has a double eye, one at the end the other on the upper surface near the end, having them made in calibers from 30 to 40 F. These do not readily become plugged, but should there be a late copius hemorrhage into the bladder at the end of 24 or 48 hours, filling this viscus with clots, the tube is useless to assist in their evacuation. Two experiences of this kind led me to adopt the tube I use at present which is a metallic one 18½ cm. long, the caliber 36 F. with a large smooth eye 2 cm. long by 1 cm. wide situated near its rounded end. It is really a short evacuating tube and is made to fit the Chismore evacuator, with which attached, the bladder may be easily emptied of clots, no matter how copious the hemorrhage has been. It is worn with great comfort, does not cause tenesmus, and is usually removed at the end of the fourth day with the packing. I think

it is a very valuable devise for perineal drainage after bloody operations upon the bladder or prostate and can recommend its use to others. It is securely held in place by tapes tied back of the winged flange and fastened with safety pins to a broad band about the waist, two in front and two at the back. Continuous drainage is provided for by a piece of large-sized drainage tube attached to the metal tube and connected by a glass reduction tube to six feet of quarter-inch caliber rubber tubing which emerges from the foot of the bed and ends in a graduated bottle on the floor. This tube is so arranged with safety pins that the patient can move freely in bed without disturbing the tube in the bladder. If further drainage is required, use is made of the Tiemann perineal tubes, their caliber being reduced gradually to 20 F.

The patient's bowels are moved freely at the end of the first twenty-four hours, and afterward once daily, using such laxatives as are not disagreeable to the individual. After removal of the packing the deeper parts of the wound are not repacked, but the superficial parts are slightly stuffed with gauze, to prevent contamination with fecal matter.

During the first twenty-four hours 10 minims of the solution of adrenalin chloride 1-1000 are given every two hours hypodermatically as a hemostatic agent and cardiac stimulant, and usually 1-30 grain of strychnia at the same time. After the first day the medicines are continued at longer intervals when necessary. When the hemorrhage came directly from the bladder, I have several times succeeded in stopping it by the injection of an ounce of the solution of adrenalin chloride 1-5000. In all of my important operations upon the urinary tract for the last eight years, I have had two quarts of normal salt solution given by hypodermoclysis while the patient is on the table under the anesthetic, and this is repeated every three hours after he leaves the table until the drainage tubes show a free secretion of urine. In all this time I have never lost an operative case from suppression of urine or uremia.

I have operated forty-nine individuals ranging in ages from 49 to 80 years, for enlarged prostate with retention and catheter life, by what is known as total prostatectomy, which, of course, does not mean the removal of the organ, for this is not possible, excepting it be thoroughly ripe, when it can be stripped off the urethra like a bead off its string, as in the cases reported by Gibson and Paul Thorndyke. Prostatectomy means rather the removal of such tumors as can be shelled out or it be necessary to cut out, in order to clear the channel for the free passage of the urine. Twenty-eight of these were perineal operations, twenty-one were suprapubic. Of those operated upon through the perineum there were four who died. Two of these, the youngest, were aged 47 and 49, and had had carcinoma of the prostate. One of these had also an impassable stricture, requiring perineal section without a guide. The prostate was known to be enlarged, but was not believed to be obstructive, until an attempt was made to enter the bladder with the finger through the membranous urethra—the hard nodules, four in number, felt fibroid and were removed. The individual died from secondary hemorrhage on the fourteenth day. He was an alcoholic and had not passed any water for three days when he came into my hands. The man of 49 was a poor farmer, who had led a catheter life for three years. There was increasing difficulty in the passage of the instrument until its introduction became almost impossible. The prostatic prominences felt smooth, but were dense and rather difficult to excochleate. They did not look cancerous nor feel distinctly so, but proved to be carcinomatous upon microscopic examination. This man died within twenty-four hours from loss of blood. The third had fibrous stricture of the entire urethra complicated by cancer of the prostate. This was recognized as cancerous, but there was an obstructing nodule which could not be removed by the Bottini and it was cut away as a palliative measure of last resort. He died from secondary hemorrhage. The fourth was a large, fat, asthmatic of 73, with an enormous prostate. Operation was required to relieve him of atrocious suffering of long duration. He contracted the grippe on the fifth day, and died of cardiac failure from non-septic pneumonia on the ninth day, when his prostate wound was nearly healed. Of the suprapubic cases my first, a man of 60, was complicated by stone and an impassable stricture and died on the third day of uremia. This was before I commenced to use normal salt solutions by hypodermoclysis in my operations. My third case, a poor and ignorant Mexican, 74 years old, commenced to urinate naturally and left the hospital before his wound was thoroughly healed. He was careless and got fly-blown. He returned to the hospital three weeks after he had left, the whole pelvis filled with maggots which had eaten through the cartilage of the symphysis, causing separation of the bones. He died in a few days. The next fatal case was that of a man upon whom I had done a Bottini operation for a pear-shaped median intervesical projection. My assistant had turned on too great an amperage and the platinum knife being too hot it did not close the blood vessels. The result was a profuse hemorrhage within an hour, to which my attention was called by the ward nurse after I had finished a prostatectomy upon another man. His bladder was opened suprapubically and no cut or tear I made in the operation stopped bleeding till he died in a few hours. Two years ago a patient

upon whom I had done a combined prostatectomy died on the seventeenth day. His suprapubic wound was almost healed and he was urinating naturally. He had not had a single adverse symptom; he had been sitting up in bed talking pleasantly to his nurse and a relative, making plans for the future, when he put his hand to his heart with a sudden cry of pain and was dead before they could assist him, probably from embolism. No post mortem was allowed.

In 1902 I operated a man of 68 who had been ailing for many years with a stone in the bladder and a very tight stricture, together with an enlarged prostate. He had had a number of severe hemorrhages caused by the stone, which was a very rough one, and was much exhausted. He had a great terror of operations, and it was only when he was very sure that he would die that he consented to be operated upon, to satisfy his wife and his children. He refused to take proper nourishment, or could not take it, I do not know which, and died of exhaustion about ten days after operation.

To those who calculate by percentage alone, this list of nine deaths may seem a high one; but in all of these cases but two a painful death was certainly known to be rapidly approaching, and the operation should in no way be charged with the death. In the case of the farmer of 49 with cancer, if I had suspected the nature of the diseases before operation, I should have done a Bottini upon him, or have established suprapubic drainage with a DePezzer or Senn drainage tube, and thus have prolonged his life. With the case of hemophilia the death is hardly chargeable to prostatectomy, but rather to the carelessness of a hospital assistant in not watching the amperage of the current used to heat the blade in the preceding Bottini operation, for the pear-shaped nodule with its pedicle was cut in half as beautifully as if done with a knife. I do not know that the man who was supposed to have died from an embolus did so at all, but his prostate had been removed seventeen days before and he had not left the hospital, for his wounds were not entirely healed. He died suddenly, and death may have been caused by the operation. The maggot case was clearly criminal neglect on the part of himself and his relations in removing him from the hospital. Deducting these five cases from the total of 49 we have four deaths in 44 cases, which is 9½ per cent, including two cases which in the light of my experience I should never have operated except by the Bottini method.

From reading the text on almost any modern work on general surgery the average physician might readily conclude that these operations are very uncertain in their results and very dangerous. This represents ultra-conservatism, the disagreeable point of view which always tends to retard the advancement of good work in surgery. And then again, after reading the articles published by certain operators who have no deaths, and whose cases are always thoroughly healed and recover the voluntary power of urination in eighteen or twenty days, grave suspicions that the reports are doctored to gain a desired reputation for extraordinary skill are more than likely to be entertained. The former make the operation too difficult to attract the ordinary surgeon, the latter make it appear so easy and so certain in its results that it must inevitably cause great damage and loss of life by its being entered into very lightly by many who are incompetent to perform it properly or take good care afterward of those operated. No one operation is suitable to all cases, and the ultimate results which are very excellent in the majority are sometimes far from being perfect. Performed as they are upon old men whose bladders are diseased and misshapen, whose urethras are often the seat of tight strictures and whose kidneys act very imperfectly, whose nutrition is poor, and who too frequently are the subject of the diseases of the other vital organs, the wonder is, not that we do not always obtain perfect success, but that we ever do so; and not that we sometimes lose a man from operation, but that any ever get well.

The coast is well charted and it is not necessary for us to be wrecked upon the known reefs or point of rocks that may be seen. A death from uremia, where proper precautions have been taken before, during and after the operation, is entirely unnecessary. Death from purulent infiltrations of the abdominal wall or the perineum is also easily prevented. But the perils of secondary hemorrhage, of thrombosis, of testicular abscess, of multiple abscesses of the kidney, or of the imperfect removal of the obstruction by perineal operation, are things which cannot always very well be provided against.

(*To be continued.*)

With Eminent Fairness—We of Southern California are especially pleased with our President and with the election of Dr. L. S. Thorpe on the Board of Examiners. We all know that Dr. Thorpe will be able, fair and painstaking in the performance of his duties. We are glad also to see Dr. J. G. Baird of Riverside and Dr. F. C. E. Mattison of Pasadena on the Board of Trustees, and Dr. F. M. Pottenger as alternate on the Board of Examiners. The State Society always treats Southern California with eminent fairness, and we believe it is not assuming too much for us to say that Southern California, in proportion to her population, does her full share toward maintaining the high standard of the work of the Society.—*Southern California Practitioner.*